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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/101,833	01/29/99	HIRAMATSU	PM255101

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EXAMINER

EVANS, G

ART UNIT PAPER NUMBER

1725

DATE MAILED: 11/08/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/101,833

Applicant(s)

Hiramatsu

Examiner

Evans

Group Art Unit

1725

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on August 18, 2000
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-25 is/are pending in the application.
- Of the above claim(s) 13-25 is/are withdrawn from consideration.
- ☒ Claim(s) 7, 8/7, 9/8/7, 10 is/are allowed.
- ☒ Claim(s) 1-6, 8/5, 8/6, 9/8/5, 9/8/6, 11, and 12 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 8
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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DETAILED ACTION

1. Claims 13-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected species. Election was made **without** traverse in Paper No. 7.

2. Claims 6, 8/6, 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 6 on lines 8-11 the limitation "the wavelength of said laser processing laser source is between 720nm or less and the minimum wavelength of the laser source or more" is confusing as it is inclusive of all possible wavelengths whether above the wavelength of the laser source or less. Similarly the limitation in claim 6 "or between 6000nm or more and the maximum wavelength of the laser source or less" is inclusive of all possible wavelengths. Claim 8/6 is indefinite because it depends upon claim 6. As in claim 6 the limitations recite all possible wavelengths.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Koide et al. in U.S. Patent No. 5,670,067.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 6, 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muncheryan in U.S. Patent No. 4,979,180 in view of DeRossett, Jr. in U.S. Patent No. 5,298,717. Muncheryan discloses a carbon dioxide laser (see column 9, line 53) and a harmonic wave generator (element 12 see column 5, lines 63-64), but does not disclose a scanning head for deflecting the beam in the X-Y directions. DeRossett, Jr. teaches using a scanning head for deflecting the beam in two directions (see column 5, lines 43-57) and using input to the scanning head from an optical fiber (see column 10, lines 56-59). It would have been obvious to adapt Muncheryan in view of DeRossett, Jr. to provide this to provide laser treatment on a workpiece in a 2-dimensional plane.

7. Claims 8/5, 8/6, 9/8/5, 9/8/6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muncheryan in view of DeRossett, Jr. as applied to claims 5 and 6 above, and further in view of Roland et al. in U.S. Patent No. 3,792,287. Muncheryan does not specifically disclose how the harmonic wavelength is created (see column 5, lines 62-65). Roland et al. in U.S. Patent No. 3,792,287 teaches (see column 6, lines 14-16) using a carbon dioxide laser with a thallium-arsenic-selenium crystal to obtain a harmonic frequency. It would have been obvious to adapt

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Muncheryan in view of DeRossett, Jr. to provide a nonlinear optical crystal made of thallium-arsenic-selenium crystal to double the frequency .

8. Claims 7, 8/7,9/8/7,10 are allowed.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Viherkoski in U.S. Patent No. 4,852,115 has a laser head with a carbon dioxide laser and a non-linear crystal. Troukens et al. in EP 80,651 has a reference system for adjusting the beam deflection according to the position of the workpiece on the table.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Evans whose telephone number is (703) -308-1653.

GSE

November 5, 2000

Geoffrey S. Evans

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